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ABSTRACT

The objectives of the Michigan Educational Assessment Program for 1972-73 are: (1) to provide State officials and citizens with information which contributes to an understanding of the educational needs of the State's school children and to the analysis of the educational system's response to these needs; (2) to provide citizens and educators with information regarding the public school districts and schools, the children's needs, and the district's responses to these needs; (3) to provide school districts with basic information regarding students to help students, parents, and educators assess their progress; and (4) to provide citizens with information regarding the progress of the Michigan educational system as a whole and the progress of its school districts and schools over a period of years. The methodology to be used in accomplishing these objectives is an educational management system, known as the accountability model, which has six basic components: (1) identification of common goals, (2) establishment of performance objectives, (3) assessment of needs, (4) analysis of delivery systems, (5) evaluation, and (6) recommendation for improvement. Procedural issues concern: who will conduct the program, who will be included in the program, which fourth and seventh graders will be given the assessment battery, how long it will take to administer the battery (word relationships, reading, mechanics of written English, mathematics, and composite achievement), steps being taken to assure some degree of standardization in administeration, who will administer the battery, when it will be administered, etc. (DB)

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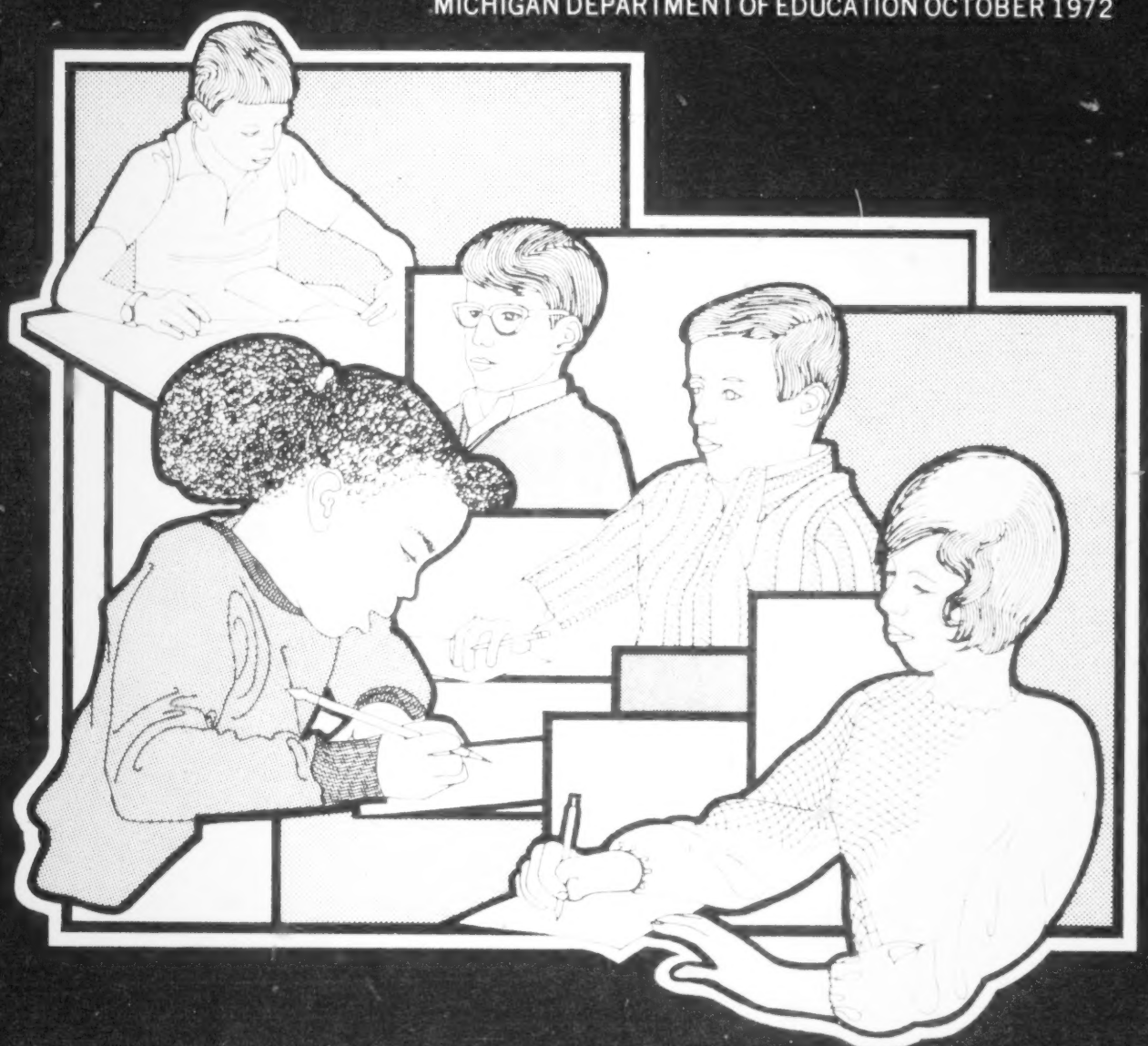
objectives and procedures

THE FIRST REPORT OF THE 1972-73 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

MICHIGAN DEPARTMENT OF EDUCATION OCTOBER 1972



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FOREWORD

The Michigan Educational Assessment Program was initiated by the State Board of Education, supported by the Governor, and funded by the legislature initially through enactment of Act 307 of the Public Acts of 1969, and subsequently under Act 38 of the Public Acts of 1970.

This report is the first in the 1972-73 series. It restates the objectives of the Michigan Educational Assessment Program for 1972-73, projects the future long-range plans for the information and planning of local districts and state officials, and indicates in some detail the specific procedures to be followed in the program in the current year. At the end of the report is a list of selected program publications which are available in single copies upon request.

The State Board of Education has adopted a six-step educational management system as a guide for improving Michigan education. The six steps are: the identification of common goals, the development of performance objectives, the assessment of educational needs, the analysis of delivery systems, the evaluation and testing of these systems or programs, and recommendations for educational improvement. This report presents information for the third step--the assessment of educational needs. Though its major purpose is to provide information for state decision makers, educational assessment also provides general information on student and system needs which, along with other information gathered by local educators, will assist them in identifying the needs of local schools and pupils.

Thanks are due to a large number of individuals and groups for making the Michigan Educational Assessment Program a reality and for continuing to work with it in its fourth year, 1972-73: to the State Board of Education for initially proposing it and continuing to support it, to the Governor and legislature for actively supporting it, and to Michigan educators for assisting with it. The program was designed and administered by the Research, Evaluation and Assessment Services Unit, Michigan Department of Education, with the assistance of Educational Testing Service of Princeton, New Jersey, and the counsel of several *ad hoc* advisory groups.

This report was prepared by Dr. David Donovan, Mr. Robert Huyser, Dr. Philip Kearney, Mrs. June Olsen, Dr. Thomas Fisher, Dr. Ed Roeber, and Dr. Daniel E. Schooley. Questions or requests for additional information relative to this report should be directed to the educational assessment staff.

John W. Porter
Superintendent
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INTRODUCTION

The Role and Purpose of The Michigan Educational Assessment Program

An outline of the State Board of Education's accountability model was provided in the 1971-72 edition of Objectives and Procedures. This section relates the progress made during the past year in implementing the accountability model; it also provides information about the long range plans for step three in the accountability model--assessment of educational needs. It must be emphasized that statements in this publication regarding these long range plans are tentative, and that comments are solicited.

The roles of the state and of local districts in educational assessment are different. The state is concerned with assessing educational needs in goal areas that are common to all educational systems in Michigan. Local school districts are concerned with assessing educational needs related to local goals. The Department of Education is committed to joining together with local districts in developing appropriate assessment models.

A Model for Educational Improvement

Educational Management System

An educational management system--commonly known as the accountability model--was approved by the State Board of Education and since then several local districts have joined with the Michigan Department of Education to demonstrate its implementation at the local level. The educational management system has six basic components: (1) identification of common goals; (2) establishment of performance objectives; (3) assessment of needs; (4) analysis

of delivery systems; (5) evaluation; and (6) recommendation for improvement. For the purposes of this section, only the first three steps will be discussed.

Step one

A statement of the common goals of Michigan education developed by a representative group of Michigan citizens was approved by the State Board of Education in September, 1971, after extensive public hearings. The approved goals are those believed to be common to all public, K-12 educational systems in Michigan and are not intended to be all inclusive. Local school districts are encouraged to examine their educational systems and adopt a set of educational goals appropriate to the local school system.

Step two

Performance objectives are currently being developed from the statements of common goals in eight priority skill areas: communication skills, mathematics, science, social studies, fine arts, health education, physical education, and occupational skills. Educators from school districts and universities, in cooperation with Department curriculum and research specialists, developed tentative performance objectives for grades kindergarten through six during 1971. In January, 1972, commissions of more than one hundred fifty classroom teachers, school administrators, curriculum specialists, board members, parents, and students assembled to begin reviewing and revising the tentative performance objectives. In June, the commissions approved the K-6 objectives in reading and mathematics for the purpose of assessment test development.

The performance objectives, like the common goals, are not all inclusive. Because local school districts might have additional educational goals, they

may also need to expand upon the performance objectives being developed for the state.

Step three

The assessment of needs is the third step in the management system and is the primary focus of this section. A purpose of the Michigan Educational Assessment Program is to provide decision makers with information about the educational needs of Michigan children and education agencies. The assessment is based on an input-process-output model. This model recognizes that schools' human and financial resources (input measures) and various teacher-classroom variables (process measures) affect educational achievement (output measures).

At present, the primary focus is on various inputs (teachers per 1,000 pupils, elementary instructional expense per pupil, parent education, etc.) considered important to educational outcomes (achievement in reading and mathematics) in the fourth and seventh grades.

While the current basic skills achievement instruments used in the Michigan Educational Assessment Program are generally consonant with the common goals and performance objectives, they were not developed directly from them. Future educational assessment instruments will be based directly on these goals and objectives. In fact, four Michigan school districts, in cooperation with the Department and with the assistance of a technical contractor, began development of objectives-referenced tests in reading and mathematics during April, 1972.

Toward a Long-Range Plan for the Michigan Educational Assessment Program

The Michigan Educational Assessment Program is an evolving program

designed to provide information relative to all of the common goals and performance objectives. The following paragraphs will indicate possible future directions of the educational assessment program.

Input Measures

In future educational assessments, the input measures will continue to be refined. Those input variables that are judged to have little relation to educational outputs will be deleted; input measures will be modified to better meet the needs of educational systems (e.g., pupil-teacher ratio was changed in 1971-72 to teachers per 1,000 pupils); and finally input indices will be added when it is believed they will better explain educational outputs (e.g., the addition in 1971-72 of elementary instructional expense per pupil). Input variables thus far have been derived from Department records and the local educational systems. In the future, other sources of data will be drawn upon (e.g., census data).

Process Measures

Measures of input and output will continue to be an integral part in the assessment program. Direct measures of process have thus far been lacking in the assessment program.

Process variables have not been included because instruments which meet the standards of the program could not be secured with available resources. Recently, the educational assessment staff has been seeking psychometrically sound instruments that measure such process variables as classroom climate, teacher attitudes, creativity, classroom interactions, etc. In the future as staff and funds become available, measures of process will be included in the educational assessment program--perhaps

on a voluntary basis with the Michigan Department of Education providing process instruments and results to interested districts.

Output Measures

Currently the Michigan Department of Education is using normative tests and reporting modes, i.e., reporting district, school, and pupil scores on a percentile rank basis. However, with the adoption of the Common Goals of Michigan Education and the development of related performance objectives, the educational assessment program became committed to producing objective referenced instruments from which the results will be reported in a criterion-referenced mode.[1]

The procedure for making this change to objective referenced instruments from normative measures will be patterned along the following steps:

(1) analyze the Common Goals of Michigan Education;

(2) develop performance objectives linked to the common goals in eight priority skill areas: communication skills including foreign language, mathematics, science, social science, fine arts, health, physical education, and occupational skills;[2]

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[1] Objective referenced instrument means that the test items are developed directly from and intended to measure specific performance objectives. Reported in a criterion-referenced mode indicates that results will be reported in terms of the percent of children who successfully achieve a given performance objective.

[2] It should be noted that assessment of the cognitive, affective and psychomotor domains is implicit in references to the future assessment of priority skill areas.

(3) select Michigan school districts to develop test items that are directly linked to the performance objectives;

(4) select a major testing company to act as a technical consultant for the school districts and Department of Education personnel and to provide scoring and analysis services;

(5) validate the objective-referenced items; and

(6) produce objective-referenced instruments which will be used in the future educational assessment program.

Of course, instruments which measure the eight basic skills priority areas will not all be developed at the same time. The Department of Education will first use the six step procedure outlined above to produce objective-referenced instruments in reading and mathematics at the fourth and seventh grades for use in the 1973-74 Michigan Educational Assessment Program. This does not necessarily imply that identical performance objectives in reading and mathematics will be assessed each year. The same objectives may be reassessed in 3 or 5 year cycles.

In the future, objective-referenced measures will be developed to assess the needs in the remaining six priority skill areas. It is also projected that in future years other grade levels will be assessed. In order to increase the number of objectives measured while keeping costs within reasonable limits, assessment in other skill areas and at other grade levels may make use of sampling procedures. Current plans call for assessment at grades 1, 4, 7, 10 and 12. Grade one has been selected because it is the child's legal entry point into the formal schooling process. Grades 4, 7, and 10 will be assessed because they represent the end of the primary, elementary, and junior high school experiences. Grade 12 represents the exit point for the child from the educational system.

An Example of Educational Assessment in the Future

The future of the Michigan Educational Assessment Program may be envisioned as follows:

(1) population assessment[3] of essential or universal objectives at grades 4 and 7 with sampling of supplementary objectives, possibly at the option of local districts.

(2) assessment in different skill areas each year in repeated cycles of from three to five years.

(3) sampling of objectives and children at grades 1, 10, and 12.

Perhaps an example of what might actually happen in assessment will be useful. Let us think in terms of three-component tests at grades 1, 4, 7, 10, and 12.

The first component of each test battery might contain groups of items that assess common performance objectives in reading and mathematics at the appropriate grade level. Second, children and youth might be assessed on supplementary performance objectives in reading, mathematics, and science at grades 1, 4, 7, 10, and 12. Assessment of objectives in other priority skill areas might be cycled on a year-to-year basis.

The second component of the battery might contain a sampling of objectives within different priority areas at each grade level. In this component, grade 1 might be assessed in the areas of health and physical education; grades 4 and 10 in social studies and vocational education; grade 7 in fine arts and vocational education; and grade 12 in science and

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[3] population assessment requires the testing of all pupils in the particular population being assessed (e.g., all fourth graders).

fine arts. Again, the objectives and priority areas would be cycled on a year-to-year basis so that needs in each of the priority areas would eventually be assessed at every grade level.

The final component would contain those additional educational objectives which local school districts add to the state performance objectives. The department of education would enter into a partnership with the districts to assess and report on these special, local performance objectives. This component would be optional for each district.

Conclusion

The reader is again reminded that the future plans are tentative and comments are welcome. The plans are being developed so that the Michigan Department of Education can provide more useful information and assistance to local educational agencies.

SECTION I

OBJECTIVES OF THE 1972-73 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

The immediate goal of the Michigan Educational Assessment Program is to provide educational decision makers throughout Michigan with useful information regarding the extent to which children and youth are acquiring skills in two of the eight performance objective areas. Within this immediate program goal, four specific objectives have been defined. These four specific objectives are the focus of this section.

Since the State Board's adoption in 1971 of a six step educational management system, the role of the Michigan Educational Assessment Program has been clarified and the four objectives further defined. As in previous years, the 1972-73 objectives identify the individuals and groups for whom educational assessment information is assembled. Further definition is also given to the uses of assessment in the activities of the educational management system.

Assessment information is intended for use in the third element, needs assessment, and the fourth element, delivery system analysis, of the State Board's system. Since the management system is appropriate to and applicable at all levels of educational governance and instruction and since the information requirements vary at the different decision making levels, assessment information must be provided to and made usable by individuals and groups at these levels.

In order to further the activities of the third and fourth steps of the State Board's six step system, the 1972-73 Michigan Educational Assessment Program will gather and report information which describes three important aspects of Michigan's educational system: (1) school and school district characteristics (including student population characteristics);

(2) educational resources (including data descriptive of finances, instructional staff, educational programs, and educational practices); and (3) student and school performance (including data descriptive of dropout rate and achievement in basic skills).

This information will be gathered from three sources: (1) records of the Department of Education; (2) a basic skills achievement battery that will be administered to all fourth and seventh grade public school students; and (3) a principal's questionnaire.

Providing State Level Public Information

Objective One

The Michigan Educational Assessment Program will provide the State Board of Education, the Executive Office, the Legislature and citizens with information which contributes to an understanding of the educational needs of Michigan's school children and to the analysis of the educational system's responses to these needs.

Rationale

In recent years, it has become increasingly evident to both professional educators and the general citizenry that reliable information concerning progress in education is scarce. As the costs of education climb and property taxes become more burdensome, the demand for performance indicators in the field of education increases. Ralph Tyler writes:

> In making wise decisions, dependable information about the progress of education is essential; without it we scatter our efforts too widely and fail to achieve our goals. Although we recognize the need, we have not yet met it. We do not now have the comprehensive and dependable data required. We have reports on numbers of schools, buildings, teachers, and pupils; we have data on the monies expended; but we lack sound and adequate information on educational results. Because dependable data are not available, the public relies on personal view, distorted reports, and journalistic impressions in forming its opinion, and the schools are both frequently attacked and frequently defended on the basis of inadequate evidence. Only a careful, consistent effort to obtain valid data about the progress of American education will correct this situation.[4]

Methodology

In order to meet the first objective of the educational assessment program, answers to two specific questions will be sought. These questions and the tentative methodologies that will be used in answering them are presented below.

1. What is the level of basic skills achievement and of other educational assessment measures in each of Michigan's schools and school districts?

Information descriptive of individual districts for each of the assessment measures will be presented in tables which list districts alphabetically by community type served. The measures will be reported in two or three ways. First, a score will be reported for each measure. For example, the percent of teachers with master's degrees, the average

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[4] Ralph W. Tyler, "Assessing the Progress of Education," paper presented at the symposium on Measurement of Quality in Education at the 132nd annual meeting of the American Association for the Advancement of Science, Berkeley, California, December 29, 1965.

years of teaching experience, teachers per 1000 pupils, the K-12 instructional expense per pupil (in dollars), and the average score of students on the reading test will be reported. Second, these scores will be reported in terms of their position on a percentile distribution of Michigan school districts. Third, the percent of fourth and seventh grade students who scored in each decile on composite achievement will be reported for each district. These tables will provide information which identifies concentrations of low and/or high scoring pupils who may be in need of special instructional programs requiring additional resources.

2. Do associations exist among the educational assessment measures? Information to answer this question will be made available in tables which display correlation coefficients computed for each pair of educational assessment measures.

Information contained in these tables will enable a further understanding to be had of the associations among such measures as percent of teachers with master's degrees and basic skills composite achievement. Although this information cannot support hypotheses of cause and effect among the measures, it will point out areas that merit further and more intensive examination. This will be helpful in the analysis of the state's educational delivery system since this activity will identify, among other things, relationships among specific kinds of resource allocations and the equality of educational opportunities for the state's school children.

Providing Information to Local School Systems

Objective Two

The Michigan Educational Assessment Program will provide citizens and educators with information regarding their public school districts

and schools. This information will contribute to an understanding of the educational needs of their district's school children and the analysis of their district's responses to these needs.

Rationale

Several studies have shown differences in educational offerings among the state's school districts. Disparities have also been shown in educational offerings within school districts. For example, Sexton in her study of a large Michigan city, provided evidence of significant class-related differences in the quality of educational programs among schools.[5]

Data from large-scale educational assessment efforts are also useful in the improvement of educational curricula. For example, assessment information can identify strengths and weaknesses in certain areas of school performance.

Methodology

It is planned that local educators will be provided with assessment information and explanatory materials from the 1972-73 educational assessment. Two basic kinds of explanatory materials will be provided: (1) norm tables that may be used to display local assessment data and (2) information that explains the meaning of the assessment measures, their limitations and their uses.

The educational assessment materials may be used to answer two questions at the local level. These questions and tentative methodologies to answer them are presented below.

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[5]Patricia Cayo Sexton, Education and Income: Inequalities in Our Public Schools (New York: Viking Press, 1964).

1. What are the levels of basic skills achievement and of other educational assessment measures in the school district in relation to other districts? Local educators may answer this question by displaying data for their school district on district norm tables that will be included with 1972-73 educational assessment results.

2. What are the levels of basic skills achievement and of other educational assessment measures in each school of the school district? Local educators may answer this question by displaying data for each school of their district. School norm tables will be provided for this purpose together with 1972-73 educational assessment results. These data should indicate which schools within a district have need of additional educational resources and improved educational programs.

Two points made in Section I are especially relevant here. First, it is the responsibility of local officials to apply the State Board of Education's six step system to their district. Second, the findings of the Michigan Educational Assessment Program should be used as a guide by local officials as they investigate in detail the responsiveness of their district to its students' needs in terms of agreed upon performance criteria. The information provided to answer this question should highlight those areas requiring special attention in local efforts to apply the Board's program.

Providing Information to Students and Parents

Objective Three

The Michigan Educational Assessment Program will provide school districts with basic information regarding students that will help the students, their parents, and educators to assess their progress. Additionally this information will be used by districts to identify students

who have extraordinary need for assistance to improve their competence consistent with the agreed upon performance objectives.

Rationale

Information regarding the educational needs of individual children can assist professional educators to design individually appropriate learning experiences for children and youth. Such information is particularly useful in identifying students who have unusual need for assistance to improve their performance in essential skill areas. Most schools have a number of students who are not able to read, write, and/or deal with mathematical concepts at desired levels. It is probable that these children will not be able to participate fully in American society without ability in the basic skills. Following the State Board's six point program, all local district officials have the responsibility of seeking an answer to a most important question: What can be done to ensure that every child who attends school develops competence in the basic skills?

The data on individual levels of competence reported by the Michigan Educational Assessment Program will identify students whose needs are not presently being met. It is then up to local officials to investigate the specific needs of these students and the responsiveness of the district's programs to these needs.

Methodology

Local educators will be able to answer one question regarding each student who completes the achievement battery.

1. What are the levels of educational attainment of each child who completes the achievement battery? Individual achievement results will

be reported in terms of: (1) the pupil's scores on the different sections of the battery, and (2) the pupil's relation to other pupils who complete the battery.

Providing Information Regarding the Progress of Education

Objective Four

The Michigan Educational Assessment Program will provide citizens of Michigan with information regarding the progress of the Michigan educational system as a whole, and the progress of its school districts and schools over a period of years.

Rationale

As was stated above, a most important question facing the state--and local school districts--is equalization and improvement of educational programs and student performance. By conducting an annual educational assessment it will be possible to measure the degree to which equalization and improvement are actually taking place.

Methodology

In order to facilitate comparisons over time, parts of future educational assessment batteries will be similar to those administered in previous years. Additionally, many of the measures descriptive of educational resources will be similar or identical on an annual basis.

Two questions will be used as a guide to the fourth objective. These questions and tentative methodologies to answer them are provided below.

1. Are the levels of achievement and of other educational assessment measures improving over time among the state's school districts? This question is concerned with the state-wide level of educational assessment

measures. It will be possible to ascertain improvement in the level of performance by comparing the percent of children who perform at particular levels in the basic skills over time.

2. Are the levels of achievement and of other educational assessment measures improving over time within the state's school districts? This question like the one above, is concerned with the quality and equity of educational opportunities--but at the local level. Hence each district will be able to tell how much its educational program is improving over time by comparing the assessment results from its schools on an annual basis.

SECTION II

SUBSTANTIVE AND PROCEDURAL ASPECTS OF THE 1972-73 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

In this section, questions and answers are presented which deal with substantive and procedural aspects of the 1972-73 educational assessment program. For the most part, these questions center on changes between the 1971-72 and 1972-73 educational assessment programs.

Substantive Issues

Four questions regarding the substance of the 1972-73 Michigan Educational Assessment Program are answered below.

1. What measures will be used in the 1972-73 program and how will they be classified? Three main types of measures will be compiled and analyzed in 1972-73: district and school resource measures; student background measures; and school/student performance measures. A tentative list of the 1972-73 educational assessment measures is presented in Figure 1.

2. What is the status of the attitude portion of the educational assessment battery? Pupil attitudes will not be measured in the January, 1973 testing. However, completely new tests of pupil attitude toward school, toward self, and toward school achievement were drafted during 1971. During the 1971-72 school year these preliminary attitude tests were administered to more than 2,500 fourth and seventh grade pupils by three school districts. The responses from that experimental use were analyzed in order to (1) determine how many distinct attitudes can be well measured; (2) select the best questions for measuring those attitudes;

FIGURE I

A TENTATIVE LIST OF THE TWENTY-FIVE MEASURES TO BE REPORTED AT THE DISTRICT OR SCHOOL LEVEL

MEASURES	DISTRICT	SCHOOL
I. District and School Resources		
A. Human Resources		
(1) Professional Instructional Staff per 1000 Pupils	X	X
(2) Teachers per 1000 Pupils	X	X
(3) Average Years Teaching Experience	X	X
(4) Percent of Teachers with Master's Degree	X	X
(5) Average Contracted Salary of Teachers	X	X
B. District Financial Resources		
(6) State Equalized Valuation per Resident Member (1971-72)	X	
(7) Local Revenue per Pupil (1971-72)	X	
(8) State School Aid per Pupil (1971-72)	X	
(9) K-12 Instructional Expense per Pupil (1971-72)	X	
(10) Elementary Instructional Expense per Pupil (1971-72)	X	
(11) Total Current Operating Expense per Pupil (1971-72)	X	
II. Student Background		
(12) Percent of Racial-Ethnic Minority Students	X	X
(13) Estimated Average Educational Level of Parents	X	X
(14) Estimated Occupational Level of District Residents	X	X
(15) Estimated Family Income Level	X	X
III. School/Student Performance		
A. Developed Verbal Ability (provided separately for Grades 4 and 7)		
(16) Word Relationships	X	X
B. Basic Skills Measures (provided separately for Grades 4 and 7)		
(17) Reading	X	X
(18) Mechanics of Written English	X	X
(19) Mathematics	X	X
(20) Composite Achievement	X	X
C. Dropout Rate		
(21) School Dropout Rate (1971-72)	X	
IV. School or District Size		
(22) Grade Four Membership	X	X
(23) Grade Seven Membership	X	X
(24) School Membership		X
(25) District Membership	X	

and (3) determine how reliably those attitudes are measured by the selected questions.

The pretest results indicated that with a thirty-question test, two distinct attitudes could be well measured: attitude toward school and self concept. The Department is exploring possible approaches to attitude measurement in the Michigan Educational Assessment Program.

3. What will be the content of the basic skills portion of the 1972-73 educational assessment battery and how will that portion of the battery be scored for individual pupils. The basic skills portion of the battery will yield five scores. Provided are measures of (1) word relationships, (2) reading, (3) mechanics of written English, (4) mathematics, and (5) composite achievement. The scores provide information in two of the eight performance objectives identified by the Department of Education.

A program of item and test development was initiated in August of 1971 to improve the present measures in areas of communication and mathematics skills. Conducted by committees of Michigan teachers with technical assistance from Educational Testing Service, this item and test development effort focused upon renewal and revision of the existing tests. This effort produced approximately 800 new questions which were assembled into pretests and assigned last January on a sampling basis to all Michigan districts for an experimental tryout of the new items. These questions were not counted in determining the scores that were reported. Instead pupil responses were analyzed later to identify the best questions to include in the 1972-73 tests.

Additionally, a program has begun to develop objective referenced tests in reading and mathematics to replace or supplement the current norm referenced tests in 1973-74. A more complete description of this program appears in the Introduction of this report.

The 1972-73 basic skills tests will resemble their 1971-72 counterparts, with some evolutionary changes. The content on which the five scores will be based is indicated below:

Word Relationships: The word relationships portion of the educational assessment battery measures knowledge of the meanings of words and understanding of relationships among words and concepts. This is accomplished through use of verbal analogy items. While test experts agree that verbal analogy items yield a measure that reflects both ability and achievement, they are divided as to the balance between these two components. The word relationships score is not considered to be very sensitive to instruction in the short run and may be considered for purposes of this program as a test of developed verbal ability.

Reading: The reading portion of the educational assessment battery measures the ability to read. It contains the following kinds of questions: vocabulary items, including synonym, associative, and illustrative; sentences, including inferences and comprehension items; and reading comprehension, including factual (explicit) and interpretive (inference) items.

Mechanics of written English: This portion of the battery measures knowledge of written English. It may include questions in such areas as: (A) spelling, employing questions based upon common errors including misunderstanding of rules for word formation, misunderstanding of rules for word transformation, reversing of letters, common mispronunciation, and spelling by sound alone: (B) effectiveness of expression, employing questions

which ask the student to demonstrate his sensitivity to language by selecting the wording which, in addition to being grammatically correct, is best in sentence structure and word order and is most precise and appropriate in idiom and diction; (C) grammar and usage, including subject-verb agreement; verb forms, double negative, adjective/adverb confusion, adjective forms, pronoun forms and pronoun-antecedent agreement (4th grade only); and (D) punctuation and capitalization, including capital letter, period, question mark, comma, quotation marks, apostrophe, and semicolon.

Mathematics: The mathematics portion of the battery measures mathematics achievement. It measures performance in: number and operations, including operations with integers, place value, properties of integers (divisibility), proper fractions, decimals and percents (7th grade only), properties of operations (commutative, associative, distributive, closure), estimation (4th grade only), special properties of zero and one and average (7th grade only); computation; geometry and measurement, including units of measure, perimeters and areas of simple polygons, scale drawings and maps (7th grade only), properties of polygons, and the circle, angles and intuitive ideas of geometry (7th grade only); relations, functions, graphs, including use of mathematical formula and reading and interpreting graphs; logical thinking, including intuitive ideas; mathematical sentences, including equations and inequalities; applications, including word problems.

The educational assessment battery will be scored and reported for individual students as it was in 1971-72. Whenever possible scores are reported in three ways: (1) a raw score which indicates the number of items to which the student gave correct responses; (2) a standard score which may be used to compare an individual student's attainments on the four measures; and (3) a percent below score which indicates the percent of

all students completing the battery who had lower standard scores.

Composite achievement: The scores in reading, mechanics of written English and mathematics are averaged together with equal weight to yield a composite achievement score. The composite achievement score will be reported for each student in only two ways. Since the composite is found by averaging the standard scores no meaningful raw score can be derived. Therefore, the composite will be reported only as a standard score and a percent below.

Procedural Issues

Eleven important questions regarding the procedures of the 1972-73 Michigan Educational Assessment Program are answered below.

1. Who will conduct the 1971-72 program? The 1972-73 program will be conducted by the Research, Evaluation and Assessment Service, Michigan Department of Education with the assistance of Educational Testing Service, Princeton, New Jersey, and the advice of an informal MEAP Advisory Council and the Council on Elementary and Secondary Education. The State Board of Education provides policy direction.

The MEAP Council is composed of eight members appointed by the Department of Education to one-year terms, and subject to reappointment by mutual consent. One member is selected from each of eight interest area panels. Nominations to the panels are solicited from 22 organizations with which persons in these eight interest areas affiliate. However, a council member is not considered to be a representative of, nor a spokesman for, the organization that suggested his or her name. The 1972-73 Council members, their interest area categories and nominating organizations are

listed below:

Council Member	Category	Nominating Organization
Mr. Henry Linne President Michigan Federation of Teachers	Teacher	Michigan Federation of Teachers
Mrs. William Swart Mt. Pleasant	Citizen	Michigan League of Women Voters
Dr. Herbert Rudman Michigan State University	Administrator	Michigan Association of Professors of Educational Administration
Dr. Frank Womer University of Michigan	Researcher	National Council on Measurement in Education
Mr. Terrance Coburn Oakland Schools	Curriculum Specialist	Michigan Council of Teachers of Mathematics
Mr. John Austin Muskegon Public Schools	Counselor, School Psychologist	Michigan Association of School Psychologists
Mr. John Lorimer Lamphere Public Schools	At Large	Department of Education
Mr. Frank Coopersmith Saginaw Public Schools	Public Relations	Michigan School Public Relations Association

2. Will all Michigan districts be included in the 1972-73 program? Yes. By legislative mandate all public school districts with pupils in grades four and/or seven will be included in the 1972-73 program.

3. Which fourth and seventh graders will--and will not--be given the 1972-73 educational assessment battery? Most fourth and seventh graders will take the assessment battery. Questions which have been

raised regarding several specific groups of students are discussed below.

Not to be Tested

Students who are confirmed Type A mentally handicapped are not to be tested whether or not a program is provided for them by the district. Other handicapped students (e.g., hard of hearing, physically handicapped, educable mentally retarded, emotionally disturbed) who receive instruction in communication and mathematics skills in special classes for the handicapped are likewise not to be tested.

To be Tested

Students currently assigned to and receiving instruction in remedial reading classes will take the assessment battery. Also, students receiving itinerant services (e.g., hard of hearing, physically handicapped, educable mentally retarded, emotionally disturbed, and those with speech impediments) in addition to instruction in the regular class program in the areas of communication and mathematics skills will take the assessment battery.

Students in non-graded programs who are identifiable as fourth or seventh graders will take the assessment battery. Students whose grade level cannot be determined should be included if they are in their fourth or seventh year beyond kindergarten.

Pupils in the public schools on a shared time basis from nonpublic schools will take the assessment battery if they are in public schools for instruction in communication and mathematics skills. If only certain of these skills are taken in public schools, the student may (a) take only those aspects of the battery for which he/she receives public school instruction or (b) at the option of the local district, be excluded from taking the battery.

4. How long will it take to administer the assessment battery? The basic skills and the word relationships portion of the battery are estimated to take a combined total of approximately 110 minutes of actual working time for completion. It is therefore recommended that the battery be administered in two sessions of approximately 90 minutes each. More detailed information will be included in the Examiner's Manual which is provided with the assessment materials.

5. What steps are being taken to assure some degree of statewide standardization in administration? The superintendent in each K-12 school district has been asked to designate a local district coordinator. It will be the responsibility of local district coordinators to: (a) receive the materials; (b) distribute them to buildings; (c) train the test administrators; (d) collect the used and unused materials (both the answer sheets and the booklets); (e) destroy the used and unused booklets and unused answer sheets to protect the security of the test content; and (f) prepare for return to Educational Testing Service the used answer sheets, school coordinators reports, and local district coordinator reports requested in the Examiner's Manual. In addition, the coordinator will answer (or relay to the Department of Education) questions that arise in his district concerning the program, the materials, or their intended use. Finally, he will certify to the Department of Education the destruction of the designated materials.

In non-K-12 districts, the function of the local district coordinator will, in general, be performed by a coordinator designated by the intermediate district superintendent. An intermediate district coordinator has been appointed in each of the intermediate districts that serves one or more non-K-12 districts. Intermediate district coordinators serve in a capacity similar to that of a local district coordinator in the K-12 districts.

A coordinator is also to be appointed for each school. These school coordinators will report to the local or intermediate district coordinators.

Three manuals are being written to assist these individuals concerned with the assessment program: (a) the Local District Coordinators' Manual; (b) the School Coordinators' Manual; and (c) the Examiner's Manual. The procedures outlined in these manuals attempt to ensure statewide standardization in the administration of the assessment battery.

6. Who will administer the educational assessment battery? It is the responsibility of the local district officials to arrange for facilities, allocate time, and determine the other administrative necessities involved in the administration of the assessment battery. The educational assessment battery will be administered by the classroom teacher in most typical fourth grade settings. In the seventh grade, the battery may be administered in classrooms by teachers (with periods extended to accomodate the length of the testing period) or the test may be administered by a principal or counselor to a large group assembled in a cafeteria, library, or, if adequate lighting and work surface are available, in an auditorium. In some schools a public address system has been used effectively to provide directions to classroom groups working under the supervision of teachers.

The persons chosen to administer the battery will be selected by local school officials and notified well in advance of the administration date and will be supplied with the necessary materials and trained in their use.

In 1971-72, assessment staff monitored the administration of the educational assessment battery in a sample of school districts. The reports indicated that the administrations were carried out smoothly. In 1972-73, a sample of school districts will again be carefully monitored in order to assist district officials and maintain the growing uniformity in administration. As in 1971-72, these monitors will be staff members of the Department of Education.

7. When will the assessment battery be administered? The first two full weeks of January, the 8th through the 19th, have been designated for administering the battery. The directions for administering the battery have been written on the assumption that the battery will be given in two sessions.

While few limitations are imposed on the scheduling of the battery within the designated period, two considerations should be borne in mind. First, by scheduling the battery early in the two-week period, time will be left to hold a make-up administration for any who missed one of the regular administrations. Second, it is generally believed that pupil performance on achievement batteries is adversely affected by such things as "Monday morning stupor" and "Friday afternoon itch." To the extent that these conditions can be predicted, it seems wise to schedule the battery to avoid them. Each district will need to review its own calendar to determine the best time for its own pupils. Districts with irresolvable time conflicts should notify staff of the educational assessment program, Department of Education (Telephone: 517--373-1830).

8. How will quantities of assessment materials needed and shipping methods be determined? Each local district superintendent will be asked to: (a) designate or redesignate a local district coordinator, (b) furnish a correct address to be used for shipment of materials; and (c) indicate the numbers of fourth and seventh grade pupils in each school.

9. When will the assessment materials be mailed and to whom? To whom should they be returned? In all K-12 districts, the assessment battery and accessory materials will be shipped on or about December 8, by Educational Testing Service to the local district coordinator who has been designated by the school superintendent.

In non-K-12 districts, the materials will be sent by Educational Testing Service to the intermediate district coordinator who will perform the functions of the local district coordniator for the non-K-12 districts in the intermediate district.

A school coordinator for each school within the district will need to be appointed by each local district coordinator. The school coordinator is responsible for all materials supplied to him by the local district coordinator.

After the administration, the educational assessment batteries and answer sheets, both used and unused, are to be returned to the local district or intermediate district coordinator from whom they were secured. That coordinator will be responsible for all materials supplied to him, and for returning to ETS these materials indicated in the instructions.

10. How--and when--will results from the 1972-73 educational assessment be reported? As indicated in the first section of this paper, three general types of data will be reported in 1972-73: (1) data regarding the educational achievement of individual students; (2) data regarding individual districts and schools; and (3) data regarding large groups of districts, schools, and students. It is planned that the data regarding individual students will be reported by April 1, 1973; that data regarding individual districts and schools will be reported by May 1, 1973; and that reports of data regarding groups of districts, schools and students will follow. These latter reports will include: (1) Individual Pupil Report: Explanatory Materials; (2) Local District and School Report: Explanatory Materials; (3) Technical Report: Michigan Educational Assessment Program, 1972-73; (4) Local District Results: Michigan Educational Assessment Program, 1972-73.

11. The 1972-73 seventh grade class was tested in 1969-70 in the fourth grade. What plans have been made to determine the growth of the pupils between these two testings? The scores of individual pupils tested

in 1969-70 were based upon short tests that were not intended to be reported for individual pupils, and indeed, were not reported. However, a record of those results has been retained and will be used in a study which will attempt to develop growth indices for groups of pupils who can be identified as having attended the same school district during the three-year interval between testings.

That growth study will require assistance from local district personnel to identify such children. Lists of pupils tested as fourth graders will be furnished prior to testing. Pupils who are still in the district would be identified and a pupil-matching number copied from the list to the pupil's seventh grade answer sheet.

The results of the study will be reported to local districts. The study is expected to provide information about (1) the average gains observed between grades 4 and 7 among pupils remaining in a district during the three-year interval, and (2) some indication of the proportion of pupils who remain in the same district over such a period and make "normal" progress. In large districts it may also be possible to examine the gains of groups of pupils selected so that their fourth grade scores are comparable. The growth analysis may yield results very different from the cross-sectional or "snapshot" analyses that have been done previously.

Selected Program Publications

1970-71 Assessment Publications

Published Reports

Objectives and Procedures of the Michigan Educational Assessment Program 1970-71. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 7, 1970. (The first report of the 1970-71 Michigan Educational Assessment Program).

1970-71 Individual Pupil Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; April, 1971. (The second report of the 1970-71 Michigan Educational Assessment Program).

Local District and School Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; June, 1971. (The third report of the 1970-71 Michigan Educational Assessment Program).

Local District Results: Lansing, Michigan: Michigan Department of Education; December, 1971. (The fourth report of the 1970-71 Michigan Educational Assessment Program). (Out of Print).

Levels of Educational Performance and Related Factors in Michigan. Lansing, Michigan: Michigan Department of Education; June, 1972. (The fifth report of 1970-71 Michigan Educational Assessment Program).

Distribution of Educational Performance and Related Factors. Lansing, Michigan: Michigan Department of Education; June, 1972. (The sixth report of the 1970-71 Michigan Educational Assessment Program).

Educational Assessment and District Enrollment in Michigan. Lansing, Michigan: Michigan Department of Education; June, 1972. (The seventh report of the 1970-71 Michigan Educational Assessment Program).

Technical Report: Lansing, Michigan: Michigan Department of Education; June, 1972. (The ninth report of the 1970-71 Michigan Educational report of 1970-71 Michigan Educational Assessment Program).

1971-72 Assessment Publications

Published Reports

Objectives and Procedures of the Michigan Educational Assessment Program 1971-72. Lansing, Michigan: Michigan Department of Education; October, 1971 (The first report of the 1971-72 Michigan Educational Assessment Program).

Individual Pupil Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; April, 1972. (The second report of the 1971-72 Michigan Educational Assessment Program).

Local District and School Report: Explanatory Materials. Lansing, Michigan: Michigan Department of Education; May, 1972. (The third report of the 1971-72 Michigan Educational Assessment Program).

Local District Results: Lansing, Michigan: Michigan Department of Education; September, 1972. (The fourth report of the 1971-72 Michigan Educational Assessment Program). (In Press).

Related Publications

Test Analysis, Michigan Assessment of Basic Skills, Grade 4, Form UMT. Princeton: Educational Testing Service; April, 1972 (SR-72-22)

Test Analysis, Michigan Assessment of Basic Skills, Grade 7, Form UMT. Princeton: Educational Testing Service; April, 1972 (SR-72-21)

1971-72 Norm Tables: Norms listed are available for Grade 4 and Grade 7

Pupil Score Norms: State, plus 5 community types

School Mean Norms: State, plus 5 community types

District Mean Norms: State, plus 5 community types.

Additional Publications

Booklets and Papers

Research into the Correlates of School Performance: A Review and Summary of the Literature. Lansing, Michigan: Michigan Department of Education, Assessment Report No. 3, 1970.

Staff Reply to the MAPEA Task Force Reports, (A July, 1972 Department staff paper replying to a report prepared by the Michigan Association of Professors of Educational Administration, Task Force on Educational Assessment and Accountability, April, 1972, Herbert C. Rudman, Chairman).